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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/598,591	12/01/2006	Jorg Hinrich Fechner	SAW0034	7449

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BAKER & DANIELS LLP
111 E. WAYNE STREET
SUITE 800
FORT WAYNE, IN 46802

EXAMINER	
ARNOLD, ERNST V	
ART UNIT	**PAPER NUMBER**
1616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/598,591	FECHNER ET AL.	
	Examiner	Art Unit	
	ERNST V. ARNOLD	1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 March 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6 and 37-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6 and 37-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 March 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *1/15/09*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 37-40 are new. Claims 7-36 have been cancelled. Claims 1-6 and 37-40 are under examination.

Information Disclosure Statement

Foreign language references in the IDS filed on 1/15/09 have been considered to the extent of their English language abstract or English language translation.

Withdrawn rejections:

Applicant's amendments and arguments filed 3/30/09 are acknowledged and have been fully considered. Any rejection and/or objection not specifically addressed below is herein withdrawn. Claims 1, 2 and 4-6 were rejected under 35 U.S.C. 103(a) as being unpatentable over JP11060277 in view of Hikata et al. (US 6410633). The Examiner withdraws this rejection because Applicant claims as a component of the glass particles Al2O3 from 0-7%, and the primary ref teaches Al2O3 from 10-25%. Therefore, when Al2O3 is present it cannot exceed 7%. The rejection is withdrawn.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-6 and 37-40 remain/are rejected under 35 U.S.C. 103(a) as being unpatentable over Fechner et al. WO 03/018495 in view of JP10158037 and Hikata et al. (US 6410633) and Beier et al. (Abstract and English translation of claims of WO 2003/062163).

Applicant claims a water insoluble silicate glass powder.

Determination of the scope and content of the prior art

(MPEP 2141.01)

Fechner et al. teach in the abstract a water-insoluble antimicrobial silicate glass with the instantly claimed amounts of components in the glass:

(57) Abstract: The invention relates to an antimicrobial silicate glass with the following weight composition in wt. % based on oxides: SiO_2 20 to 70, Na_2O 5 to 30, K_2O 0 to 5, P_2O_5 1 to 15, B_2O_3 0 to 10, CaO 4 to 30, AgO 0 to 2, ZnO 0 to 8, CuO 0 to 5, MgO 0 to 8, Al_2O_3 0 to 7, CeO_2 0 to 5, Fe_2O_3 0 to 2 whereby the sum of the components AgO, CuO, CeO_2 is > 10 ppm, preferably ≥ 100ppm and < 8 wt. %.

JP10158037 teaches a glass having 0.1 to 50 mol% alkali content such as soda lime glass, soda borosilicate glass and lead glass which is dipped into silver salts and heated to form glass with a region containing from 0.01 to 50 mol% silver ion density and 0.1 to 500 micron thickness on the glass surface (Abstract).

Beier et al. teach water insoluble antimicrobial glass powders with Ag, Zn, Cu, Ce, Te or I ions (Abstract and claims 1-2).

Hikata et al. teach antimicrobial glass powders with a particle size of 1 to 20 microns (claims 1-5). Glass powders are preferred because they achieve a good antibacterial function due to the larger surface area than fibers or flakes (column 2, lines 59-61).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

1. The difference between the instant application and Fechner et al. is that Fechner et al. do not expressly teach water-insoluble glass powder wherein certain components are concentrated on the surface of the glass particles and wherein the size of the particles of the glass powder are less than 50, 20, 5 and 2 microns. This deficiency in Fechner et al. is cured by the teachings of JP10158037 and Hikata et al.

2. The difference between the instant application and Fechner et al. is that Fechner et al. do not expressly teach water-insoluble glass powder wherein

certain components are Te ions. This deficiency in Fechner et al. is cured by the Teachings of Beier et al.

Finding of prima facie obviousness

Rational and Motivation (MPEP 2142-2143)

1. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to make the composition of Fechner et al. into a glass powder with certain components concentrated on the glass particle surface and wherein the size of the particles of the glass powder are less than 50, 20, 5 and 2 microns, as suggested by JP10158037 and Hikata et al., and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because Fechner et al. teaches broadly silicate glass which encompasses silicate glass powder which is known in the art as taught by Hikata et al. and the particle size is taught to be between 1 and 20 microns, which one of ordinary skill in the art would desire because Hikata et al. teach that glass powders are preferred because they achieve a good antibacterial function due to the larger surface area than fibers or flakes (column 2, lines 59-61). While Fechner et al. do not describe where the silver ion is concentrated in/on the glass particle, JP10158037 teaches means to concentrate the ions on the surface of the glass and it would be obvious to concentrate the silver on the surface where it would contact and exert its antimicrobial property.

2. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to make the composition of Fechner et al. into a glass powder with Te ions such as TeO2 and produce the instant invention.

One of ordinary skill in the art would have been motivated to do this because the analogous art of Beier et al. teach adding TeO2 to make antimicrobial glass powders. It is merely substituting one antimicrobial oxide for another.

In light of the forgoing discussion, the Examiner concludes that the subject matter defined by the instant claims would have been obvious within the meaning of 35 USC 103(a).

From the teachings of the references, it is apparent that one of ordinary skill in the art would have had a reasonable expectation of success in producing the claimed invention. Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Response to arguments:

Applicant asserts that the silver of the primary reference is not concentrated in regions of the glass particles that are near the surface because the silver is introduced into the glass during the melting process or through ion exchange of the glass after melting. The Examiner cannot agree for the following reasons. First, this is merely opinion without evidence. There is nothing in the art that says they are not concentrated near the surface. Secondly, the secondary

reference teaches concentrating the silver on the surface. The predictable and expected result is an antimicrobial glass. Absent unexpected results, the claims remain obvious. Respectfully, these arguments are not persuasive and the rejection is maintained.

Conclusion

No claims are allowed.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernst V. Arnold whose telephone number is 571-272-8509. The examiner can normally be reached on M-F (7:15 am-4:45 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ernst V Arnold
Examiner, Art Unit 1616

/Johann R. Richter/

Supervisory Patent Examiner, Art Unit 1616